Defense Information Systems Agency

A Combat Support Agency

GIG Technology Areas of Interest

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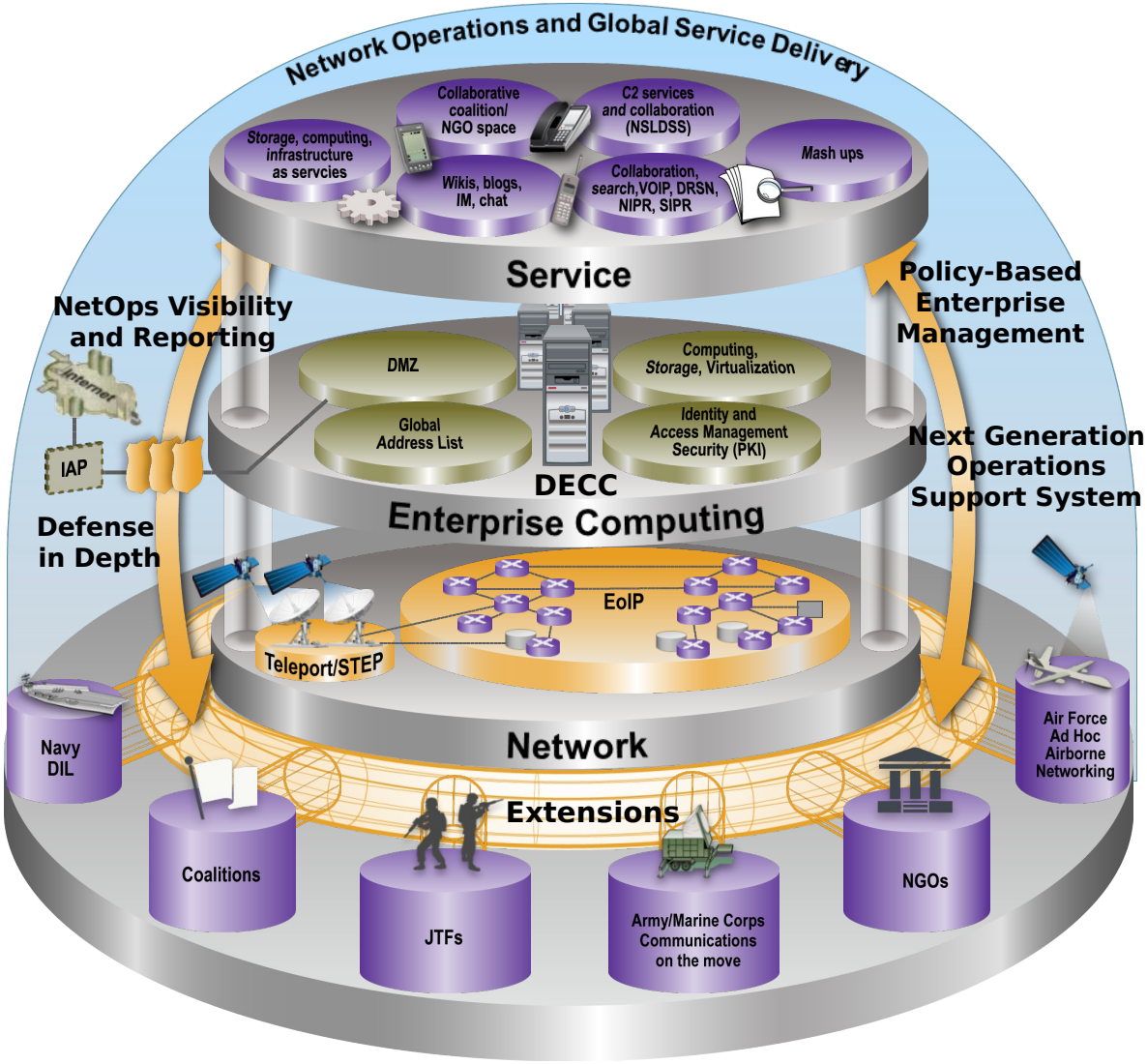
Some Themes

- Future GIG
- Decision Support leveraging Web 2.0
- Agile Development (software and systems)
  - Forge.mil
  - RACE
  - Integrated Test Environments
- Unified Communication & Collaboration (UCC)
- Mobility (wireless)
- Summary

The Enterprise



GIG 2.0 “Game Changing” Characteristics

- IT Performance and Functionality based on Mission Need

  All users operate within the same environment, however, the functionality available to the user, and how well this functionality performs, is differentiated based on mission need.

- Reduced Attack Surface

  The number of points where networked information technology systems can be attacked are reduced at the user end devices, at the information and enterprise services, and across the network components.

- Identification friend-or-foe (IFF) drives access and defense

  People, devices, information, and enterprise services and their relevant attributes are identified and authenticated. This identification, and the strength of their authentication, determines what they have access to, and how they are defended against.

- IT Engineered for Change

  The acquisition process remains the same, but capabilities are delivered at the pace of the IT “state-of-the-practice” because systems are engineered so they can be adapted to current technology at the time of delivery.

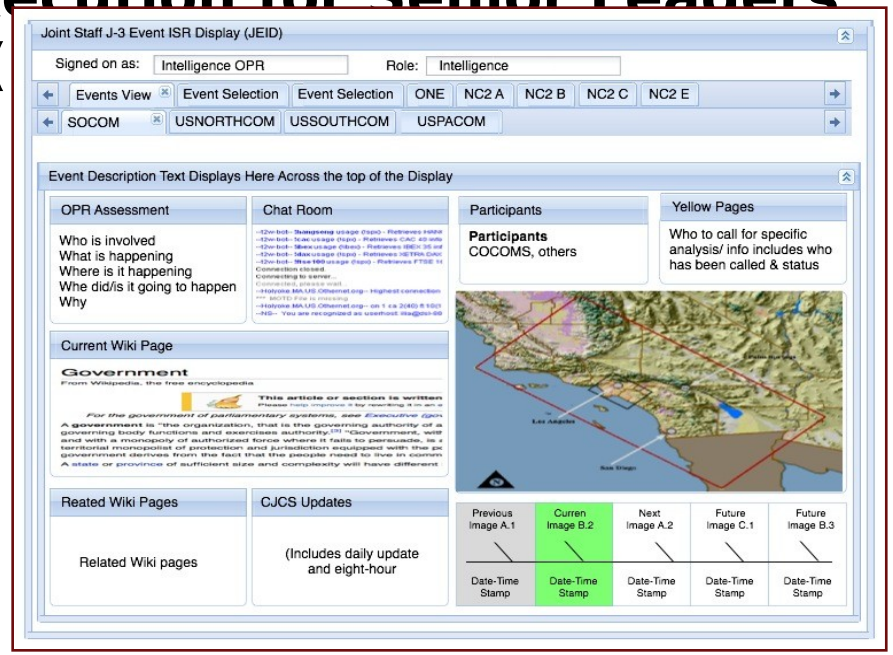
Technology Challenges & Research Initiatives

- **Always On Network:**
  Research Initiatives
  - **Enterprise-wide Accreditation Process**
  - **Logical Segmentation NetOps**
  - **Content Delivery**
- **Enabling Enhanced Information Sharing:**
  Research Initiatives
  - **Attribute Governance, Management, and Maintenance**
  - **Expose Attributes in Various Classification Domains**
  - **ABAC Enablement of Application**
  - **Self Aware, Self Conforming Applications**
- **Better, Safer, End-User Devices:**
  Research Initiatives
  - **Improved Identification of Assets**
  - **Virtual Desktops**
  - **Device Configuration Engineering and Strategy**
  - **Safe Browsing**
  - **E-mail Filtering Gateway**

National Senior Leadership Decision Support System (NSLDSS) Mashup

National Senior Leadership Decision Support Service (NSLDSS):

- **Developing a rapid situation awareness (SA) to support response, planning, and execution for Senior Leaders in Department of Defense (**
- Objectives:
  - Provide accurate, timely, and focused SA of situations, operations, and events of interest around the world
  - Deliver key data to senior leaders regardless of their physical location and display



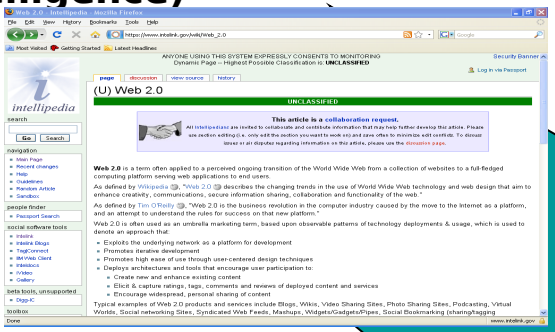
A mashup is a website or application that combines content from more than one source into an integrated experience' (Wikipedia)

How Are We Developing the Defense Web 2.0 Environment

Web 2.0 Environment

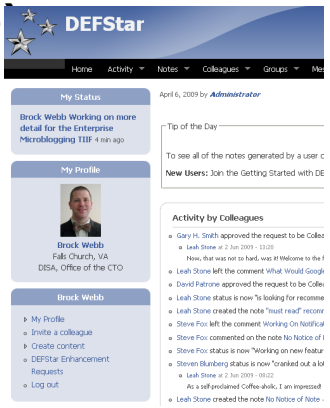
1. Community Publishing: Wiki (Intellipedia):

(Harnessing Collective Intelligence)



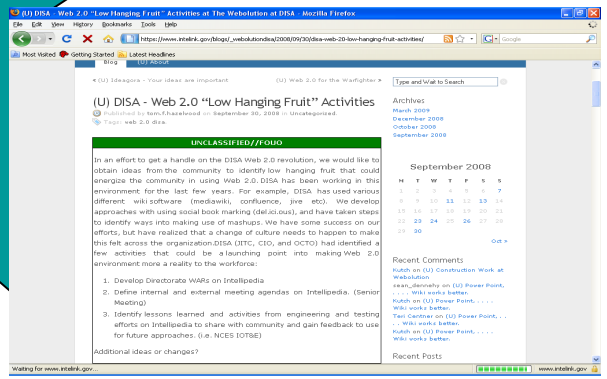
2. Relationship Building Social Networking Service (DEFStar):

(Harnessing Collective Intelligence)



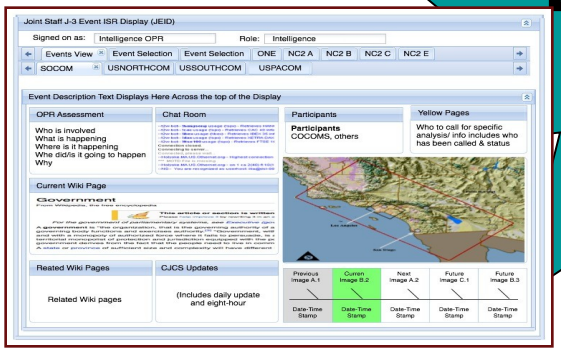
3. Community Discussions Blog (Intellipedia):

(Harnessing Collective Intelligence)

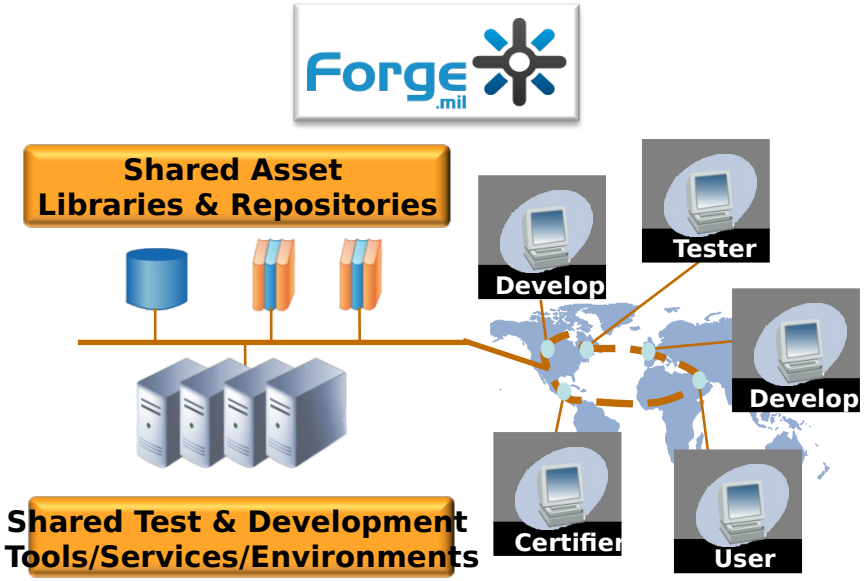


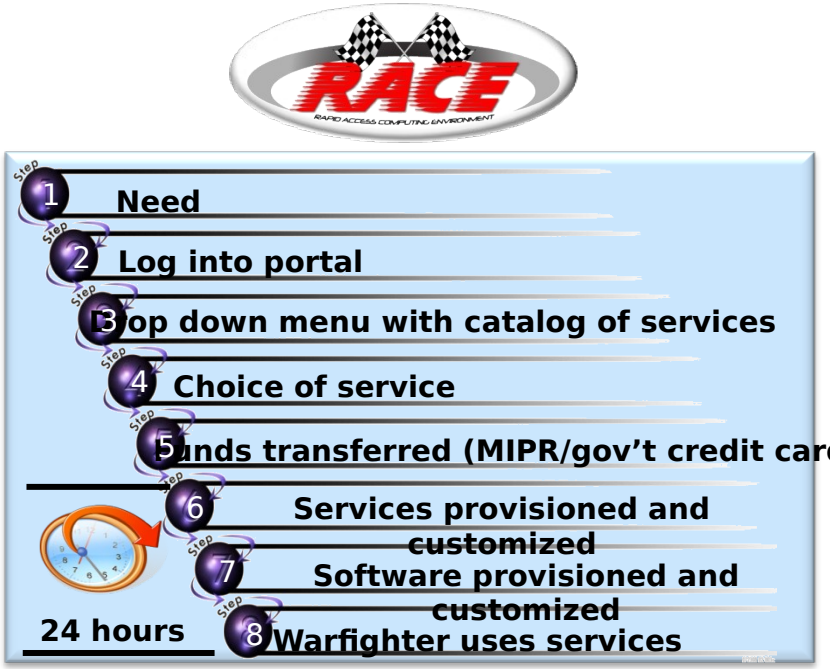
4. Information Aggregation Mashup (NSLDSS):

(Rich User Experience)



Agile Software Development




RACE
RAPID ACCESS COMPUTING ENVIRONMENT
1 Need
2 Log into portal
3 op down menu with catalog of services
4 Choice of service
5 nds transferred (MIPR/gov't credit card)
6 Services provisioned and customized
7 Software provisioned and customized
8 Warfighter uses services
24 hours

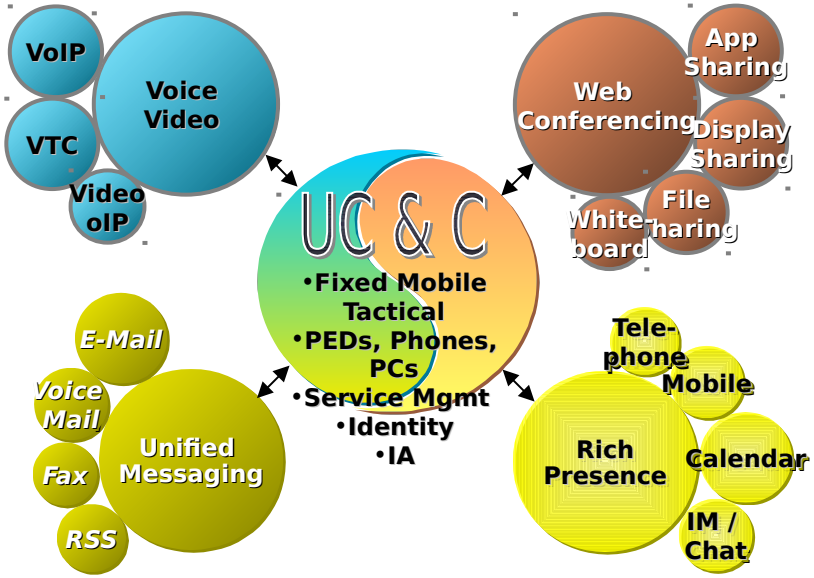
A collaborative platform for rapidly deliver of Dependable software and services in support of net-centric operations and warfare

- **Warfighters determine what & how much they use**
- **Pay for what you use – scale up & down in minutes**

Agile Development And Testing

Rapid, Standard, Self-Service Capabilities Self-provisioned Data Processing & Storage

Unified Communications & Collaboration

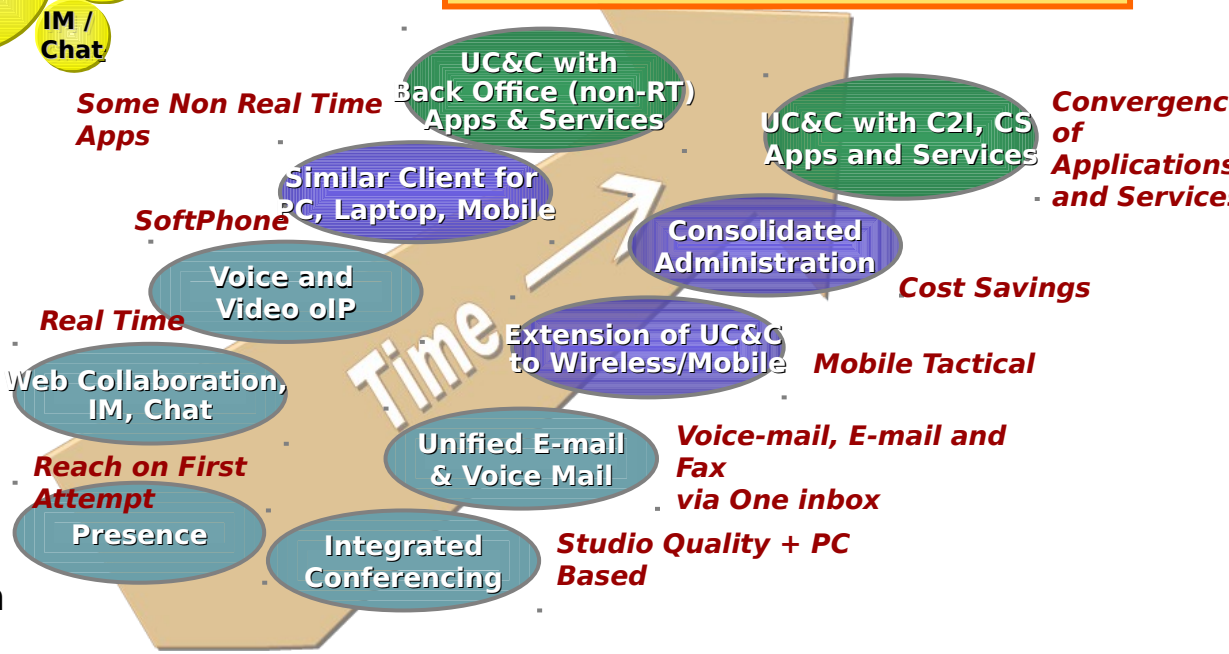


Unified Communications and Collaboration (UC&C)

- Access to the right information and the right person over any device or application the first time.
- Convergence of all forms of audio, video, web and desktop communications, built on an IP network
- Means to integrate real-time unified messaging, collaboration

UC&C Capability Evolution

More Effective Decision Making
Improved Situational Awareness
Faster Access to Subject Matter Experts
Reduced Travel, Time and Cost Saving



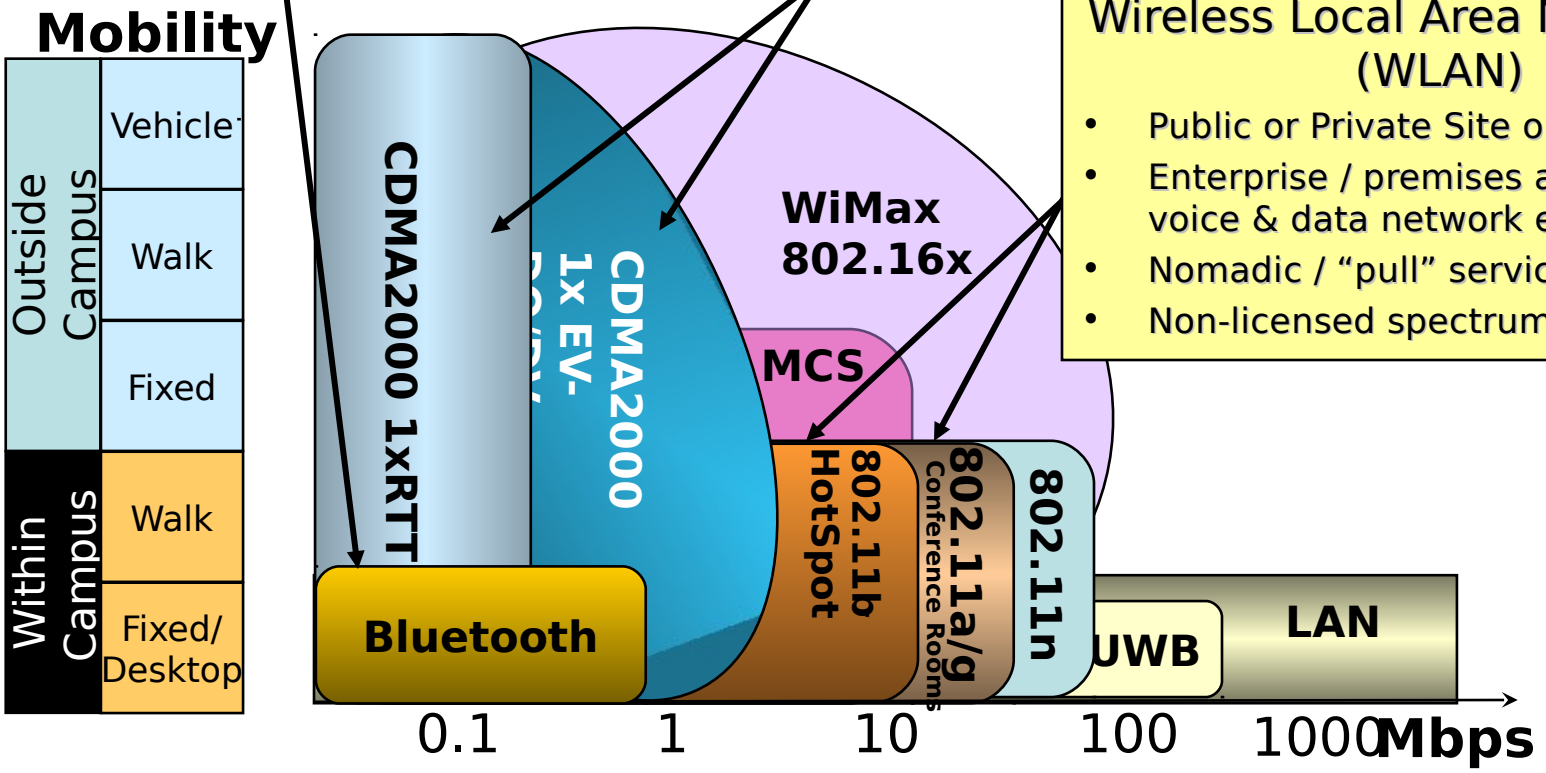
Ref: Forester, Unified Communication Industry Study, Feb

Mobility - Wireless Landscape

Wireless Personal Area Network (WPAN)
- Personal or location specific
- Cable replacement
- Low cost

Wireless Wide Area Network (WWAN)
- Metro/Geographical area
- "Always On" Services
- Ubiquitous public connectivity with private virtual networks

Wireless Local Area Network (WLAN)
- Public or Private Site or Campus
- Enterprise / premises application voice & data network extension
- Nomadic / "pull" services
- Non-licensed spectrum



Summary

- Focused technology for:
  - Reduce operations cost of the GIG Core segment
  - Management of the GIG Intermediate/Edge segments
  - New services via Unified Communications
  - Speed of deployment
- DISA is actively looking to industry to explore new technologies and concepts via JCTD's, CRADA's, BAAs and other partnerships

JCTD = Joint Capability Technology Demonstration
CRADA = Corporate Research And Development Agreement
BAA = Broad Agency Announcement

DEFENSE INFORMATION SYSTEMS AGENCY